

Example 1	Oxide	Mol. Wt. (g/mole)	Mass (g)	moles of oxide	moles of metal/mole of oxide	moles of metal	metal	Moles of metal from formula	Calculated Phosphor Composition from Oxide Mixture	Comment
	Y2O3	226	9.82	0.0435	2	0.0869	Y	0.87	0.87	
	CeO2	172	2.07	0.0120	1	0.0120	Ce	0.12	0.12	
	Tb4O7	748	37.57	0.0502	4	0.2009	Tb	2.01	2.01	
	Al2O3	102	26.41	0.2589	2	0.5178	Al	5	5.18	Excess Al2O3

Example 2	Oxide	Mol. Wt. (g/mole)	Mass (g)	moles of oxide	moles of metal/mole of oxide	moles of metal	metal	Moles of metal from formula	Calculated Phosphor Composition from Oxide Mixture	Comment
	Y2O3	226	32.18	0.1424	2	0.2848	Y	2.85	2.85	
	CeO2	172	2.07	0.0120	1	0.0120	Ce	0.12	0.12	
	Tb4O7	748	0.56	0.0007	4	0.0030	Tb	0.03	0.03	
	Al2O3	102	26.41	0.2589	2	0.5178	Al	5	5.18	Excess Al2O3

Example 3	Oxide	Mol. Wt. (g/mole)	Mass (g)	moles of oxide	moles of metal/mole of oxide	moles of metal	metal	Moles of metal from formula	Calculated Phosphor Composition from Oxide Mixture	Comment
	Y2O3	226	32.18	0.1424	2	0.2848	Y	2.85	2.85	
	CeO2	172	2.07	0.0120	1	0.0120	Ce	0.12	0.12	
	Tb4O7	748	0.56	0.0007	4	0.0030	Tb	0.03	0.03	
	Al2O3	102	26.41	0.2589	2	0.5178	Al	5	5.18	Excess Al2O3

Example 4					
Oxide	Mol. Wt. (g/mole)	Mass (g)	moles of oxide	moles of metal/mole of oxide	
Y <sub>2</sub> O <sub>3</sub>	226	26.76	0.1184	2	0.2368
CeO <sub>2</sub>	172	2.07	0.0120	1	0.0120
Tb <sub>4</sub> O <sub>7</sub>	748	9.53	0.0127	4	0.0510
Al <sub>2</sub> O <sub>3</sub>	102	26.41	0.2589	2	0.5178
				Al	5
					5.18 Excess Al <sub>2</sub> O <sub>3</sub>

Example 5					
Oxide	Mol. Wt. (g/mole)	Mass (g)	moles of oxide	moles of metal/mole of oxide	
Y <sub>2</sub> O <sub>3</sub>	226	30.82	0.1364	2	0.2727
CeO <sub>2</sub>	172	4.13	0.0240	1	0.0240
Tb <sub>4</sub> O <sub>7</sub>	748	0.56	0.0007	4	0.0030
Al <sub>2</sub> O <sub>3</sub>	102	26.41	0.2589	2	0.5178
				Al	5
					5.18 Excess Al <sub>2</sub> O <sub>3</sub>

Example 6					
Oxide	Mol. Wt. (g/mole)	Mass (g)	moles of oxide	moles of metal/mole of oxide	
CeO <sub>2</sub>	172	1.65	0.0096	1	0.0096
Tb <sub>4</sub> O <sub>7</sub>	748	43.07	0.0576	4	0.2303
Al <sub>2</sub> O <sub>3</sub>	102	21.13	0.2072	2	0.4143
				Al	5
					5.18 Excess Al <sub>2</sub> O <sub>3</sub>

Example 7	Oxide	Mol. Wt. (g/mole)	Mass (g)	moles of oxide	moles of metal/mole of oxide	moles of metal	moles of metal from formula	Calculated Phosphor Composition from Oxide Mixture	Comment
	Ga2O3	187	7.5	0.0401	2	0.0802	Ga	1	1.00
	CeO2	172	1.65	0.0096	1	0.0096	Ce	0.12	0.12
	Tb4O7	748	43.07	0.0576	4	0.2303	Tb	2.88	2.88
	Al2O3	102	17.05	0.1672	2	0.3343	Al	4	4.18 Excess Al2O3

Example 8	Oxide	Mol. Wt. (g/mole)	Mass (g)	moles of oxide	moles of metal/mole of oxide	moles of metal	moles of metal from formula	Calculated Phosphor Composition from Oxide Mixture	Comment
	Ga2O3	187	15	0.0802	2	0.1604	Ga	2	2.01
	CeO2	172	1.65	0.0096	1	0.0096	Ce	0.12	0.12
	Tb4O7	748	43.07	0.0576	4	0.2303	Tb	2.88	2.88
	Al2O3	102	12.97	0.1272	2	0.2543	Al	3	3.18 Excess Al2O3

Example 9	Oxide	Mol. Wt. (g/mole)	Mass (g)	moles of oxide	moles of metal/mole of oxide	moles of metal	moles of metal from formula	Calculated Phosphor Composition from Oxide Mixture	Comment
	Y2O3	226	4880	21.5929	2	43.1858	Y	1.5	1.50
	Gd2O3	362.5	7050	19.4483	2	38.8966	Gd	1.35	1.35
	CeO2	172	595	3.4593	1	3.4593	Ce	0.12	0.12
	Tb4O7	748	161.6	0.2160	4	0.8642	Tb	0.03	0.03
	Al2O3	102	7340	71.9608	2	143.9216	Al	5	5.00 Stoichiometric